



NATIONAL RADIO ASTRONOMY OBSERVATORY

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20 June 2012

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)

Amendment of Part 15 of the Commission's) ET Docket No. 10-23
Rules To Establish Regulations for Tank)
Level Probing Radars in the Frequency Band)
77-81 GHz)

and)

Amendment of Part 15 of the Commission's)
Rules To Establish Regulations for Level)
Probing Radars and Tank Level Probing)
Radars in the Frequency Bands)
5.925-7.250 GHz, 24.05-29.00 GHz and)
75-85 GHz)

**Reply Comments of the
National Radio Astronomy Observatory
Charlottesville, VA 22903**

Introduction

1. Here, the National Radio Astronomy Observatory ("NRAO" or "the Observatory") provides reply comments in the matter of the Commission's Further Notice of Proposed Rule Making and Order FCC 12-34 ("the FN&O") regarding the Commission's proposals for rules governing operation of Level Probing Radars (LPR) including Tank Level Probing Radars (TLPR) inside containers or vessels.
2. NRAO (<http://www.nrao.edu>), operated by Associated Universities, Inc. (AUI), (<http://www.aui.edu>) under a cooperative agreement with the National Science Foundation, is the largest observatory dedicated to radio astronomy and one of the largest astronomical observatories in the world. NRAO operates one dozen radio astronomy stations in rural and remote regions of the United States that stand to be

affected to varying degrees by the proposed rules. University radio observatories not affiliated with NRAO also operate in these bands.

Reply to comments of the Measurement, Control & Automation Association (MCAA)

3. NRAO encourages the Commission to adopt the RFI mitigation measures discussed by MCAA in Section E of its comments, specifically, the provision of 4 km exclusion zones around the radio astronomy sites given in MCAA's table; restriction of the height of LPR at/below 15 meters above ground level within 40 km of those sites; and a general restriction to downward-pointing installations at fixed locations, prohibiting hand-held operation or sales to residential customers. Such measures are consistent with suggestions in comments made by NRAO and CORF and with rules adopted by the ECC for LPR operation.
4. With those measures in place it would not be necessary to otherwise restrict LPR operation in the band 6650 – 6675.2 MHz as proposed by NRAO in its own comments.

Reply to comments of the Committee On Radio Frequencies (CORF)

5. Consistent with its own comments and those filed by CORF, NRAO encourages the Commission to provide for some way to memorialize the emplacement of LPR. Recognizing the likely diversity of vendors, installers and operators discussed by MCAA but given the limited number of radio astronomy sites and possibly-affected LPR, perhaps an accommodation may be reached whereby installations are only noted within 40 km, and perhaps marked only by the mere sending of a letter or email to the Spectrum Management Office at NSF.

Respectfully submitted,
National Radio Astronomy Observatory

A handwritten signature in blue ink that reads "Harvey S. Liszt". The signature is fluid and cursive, with the first name "Harvey" being the most prominent.

Harvey S. Liszt
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